PSTN
CD
17
30

PSTN

SM
20

32
MODEM
BANK

18
CM

SERVICE PROVIDER WAN

28
BSC/MSC/WF

BTS

22
24

IS-707.5

12
14
16 CD

IP GATEWAY

THE INTERNET
26

10

34

NBS TERMINAL OR
ADMINISTRATOR

FIG. 1

FIG. 2: NBS APPLICATION LAYER PROTOCOLS

FIG. 3

SIP	302
UDP	304
IP	306
PPP	308
RLP (OR V.XX)	310

CRTP 330

300
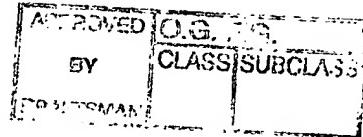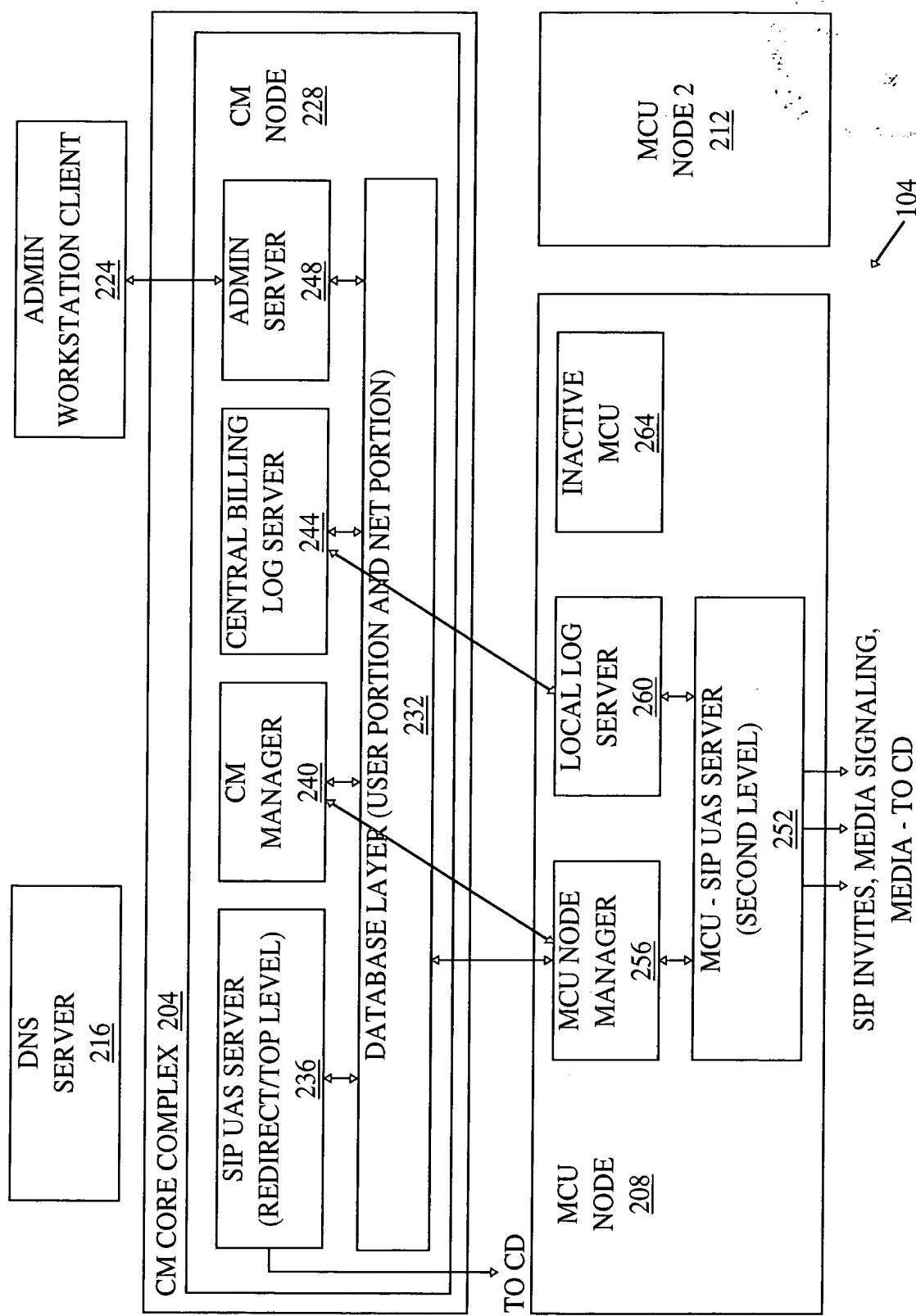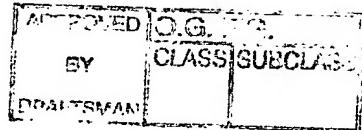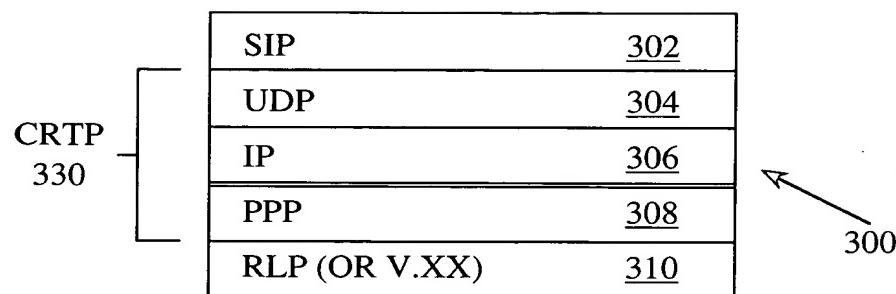
FIG. 4: NBS SIP SIGNALING PROTOCOL STACK

NBS MEDIA SIGNALING	314
UDP	304
IP	306
PPP	308
RLP (OR V.XX)	310

CRTP 330

312
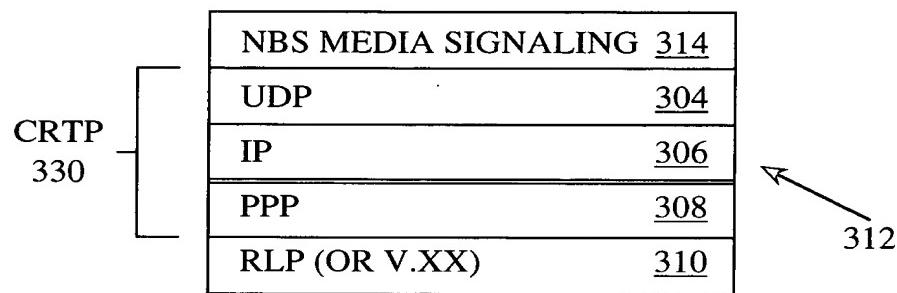
FIG. 5: MEDIA SIGNALING PROTOCOL STACK

VOCODER PAYLOAD	322
RTP	324
UDP	304
IP	306
PPP	308
RLP (OR V.XX)	310

CRTP 330

320
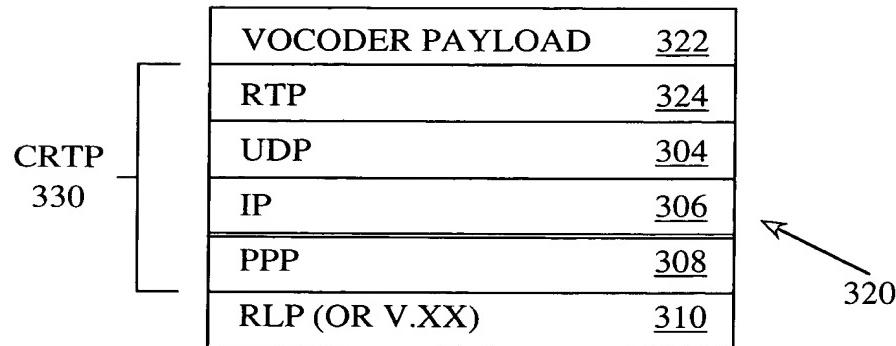
FIG. 6: RTP VOICE MEDIA PROTOCOL STACK

VOCODER PAYLOAD	322
UDP	304
IP	306
PPP	308
RLP (OR V.XX)	310

CRTP 330

332
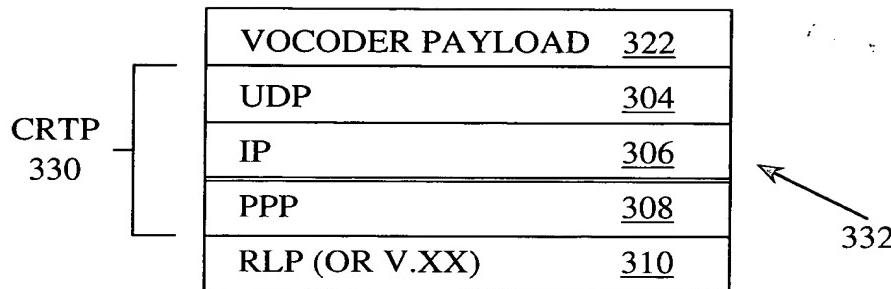
FIG. 7: UDP VOICE MEDIA PROTOCOL STACK

DATA	336
UDP	304
IP	306
PPP	308
RLP (OR V.XX)	310

CRTP 330

334
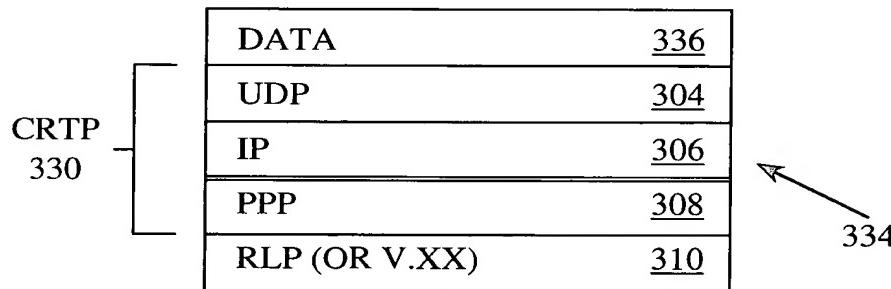
FIG. 8: MEDIA TRAFFIC (DATA) PROTOCOL STACK

| DNS	340
UDP	304
IP	306
PPP	308
RLP (OR V.XX)	310

CRTP 330

338
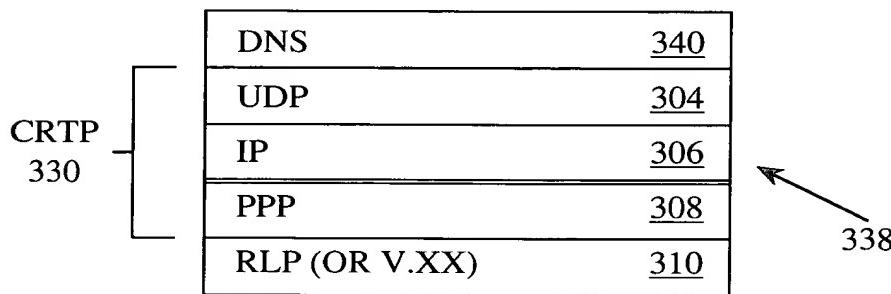
FIG. 9: DNS CLIENT PROTOCOL STACK
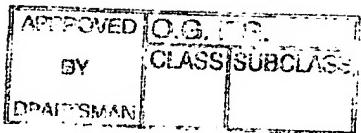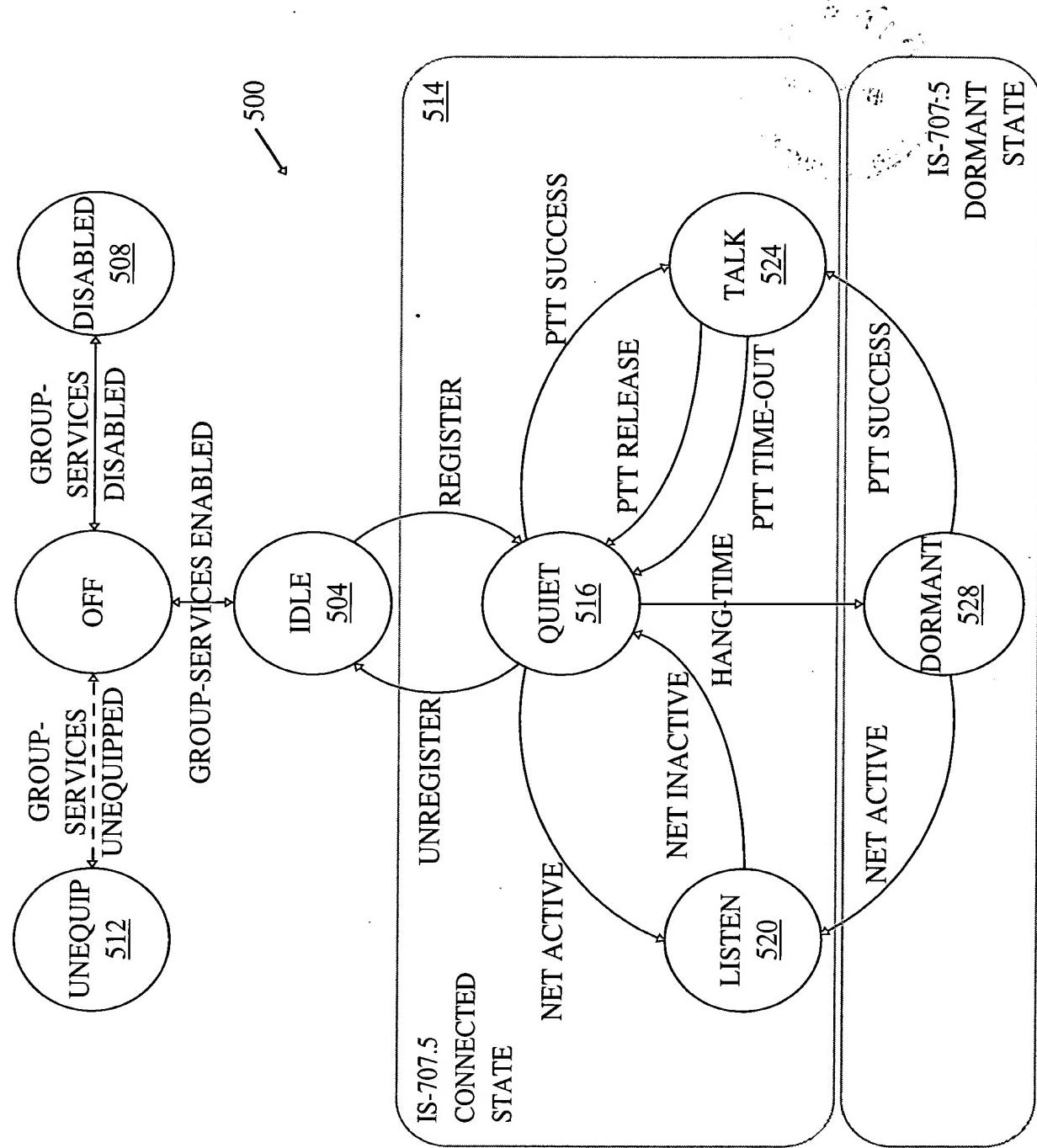
FIG. 10
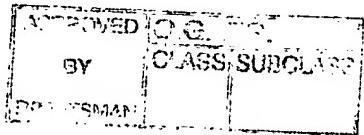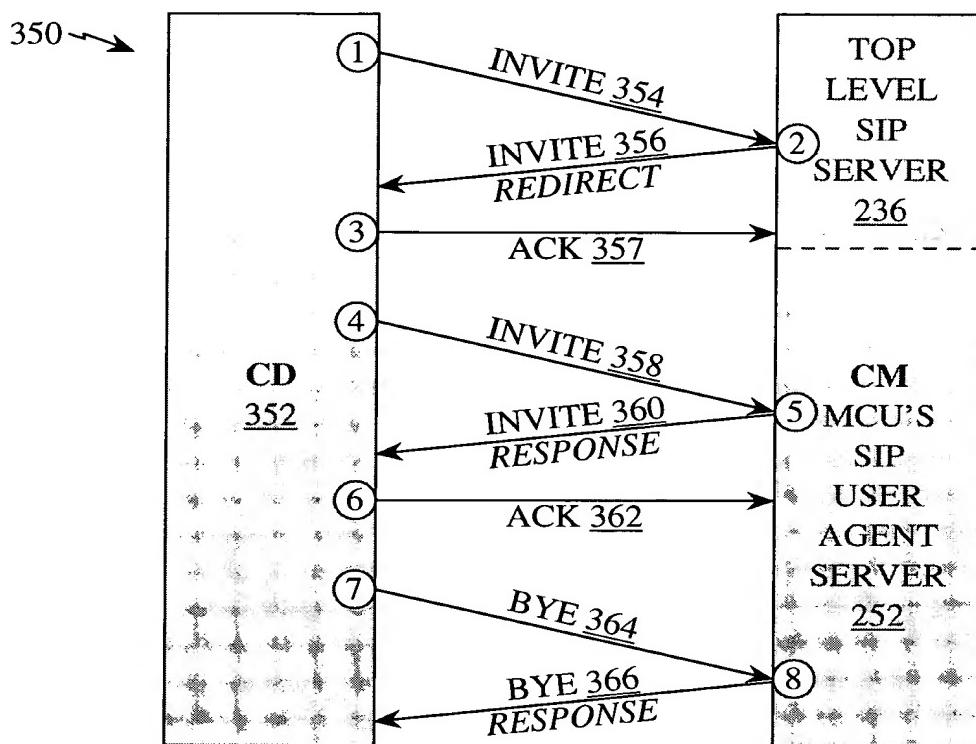
FIG. 11: SIP CALL SIGNALING
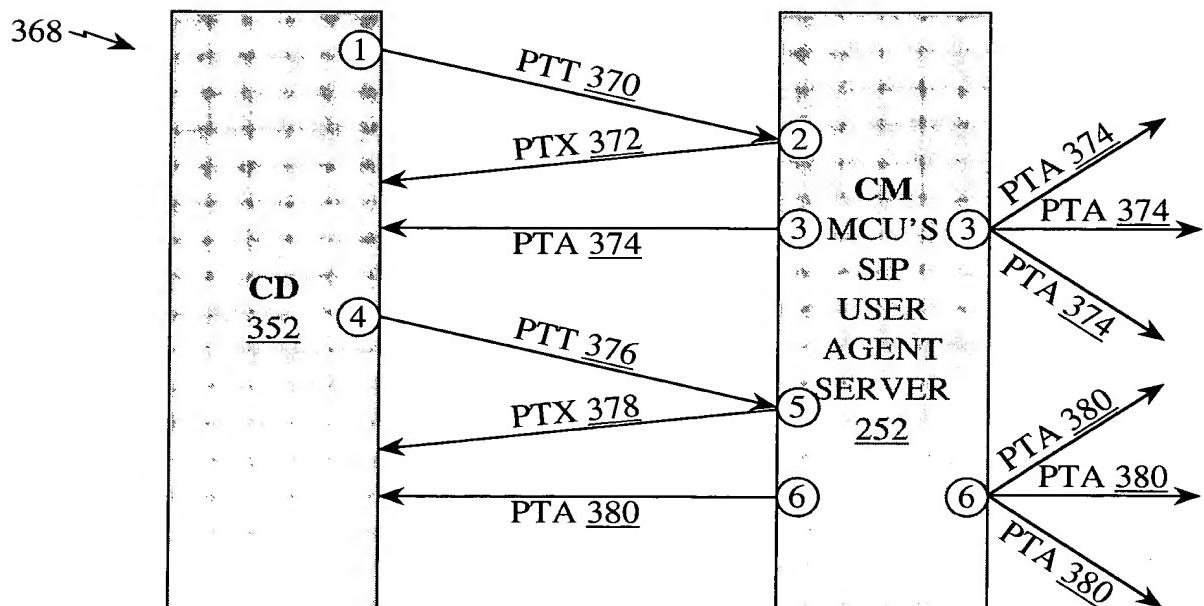
FIG. 12: MEDIA SIGNALING
MESSAGE SEQUENCE (PTT)

400

CD
352

CM
MCU'S
SIP
USER
AGENT
SERVER
252

① AYT 404
② IAH 408
③ ZZZ 412
④ PTT 416
⑤
⑦ PTX 420
⑧ PTA 428

③ ZZZ 412
ZZZ 412
ZZZ 412
AYT 424
AYT 424
AYT 424
IAH 432
IAH 432
IAH 432
PTA 428
PTA 428
PTA 428
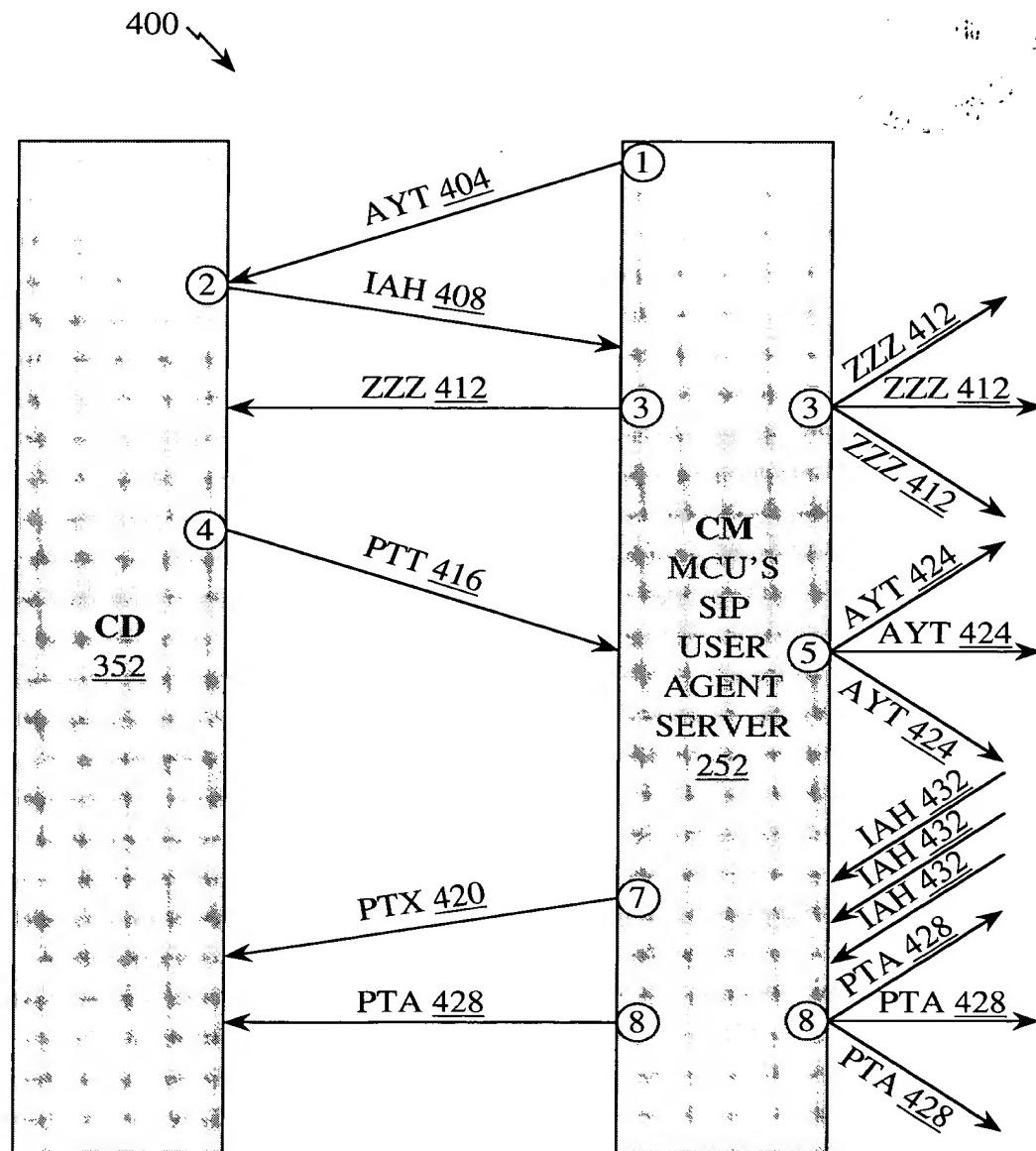
FIG. 13: MEDIA SIGNALING
MESSAGE SEQUENCE (DORMANCY)

440
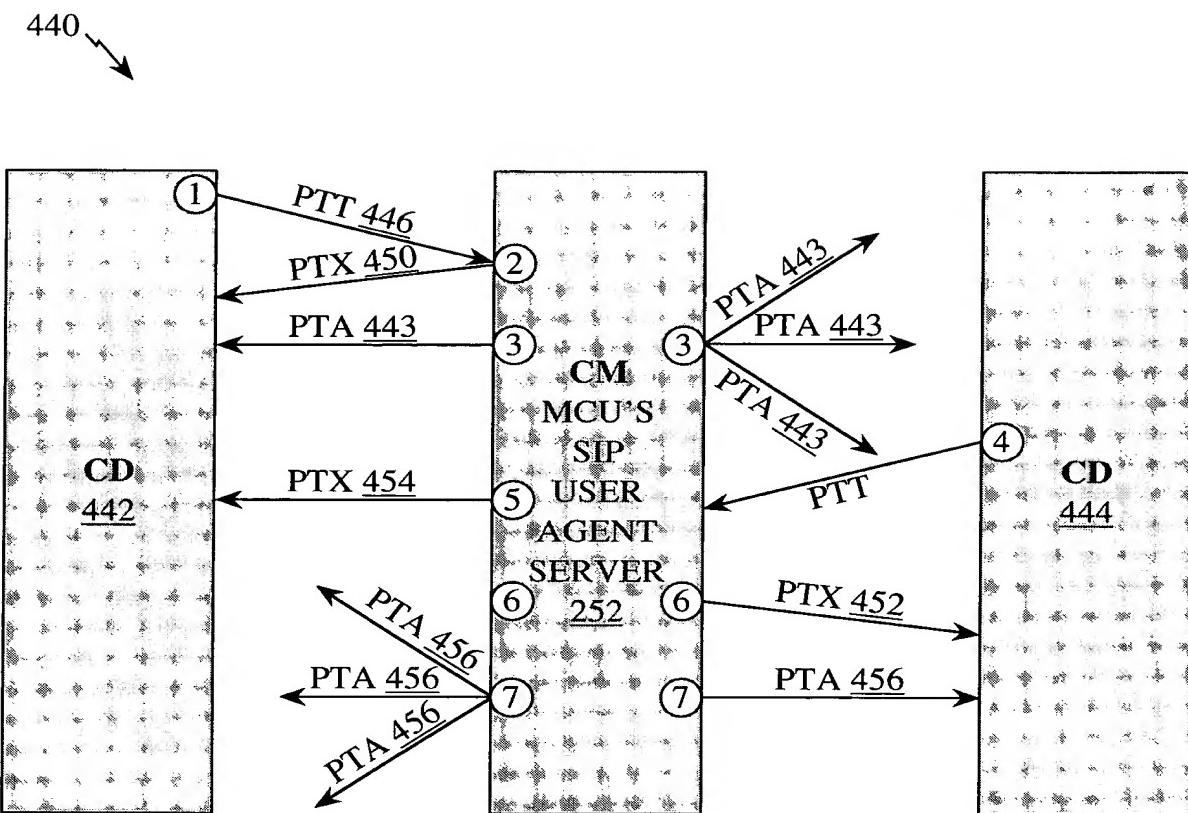
FIG. 14: MEDIA SIGNALING
MESSAGE SEQUENCE (PRIORITY ARBITRATION)
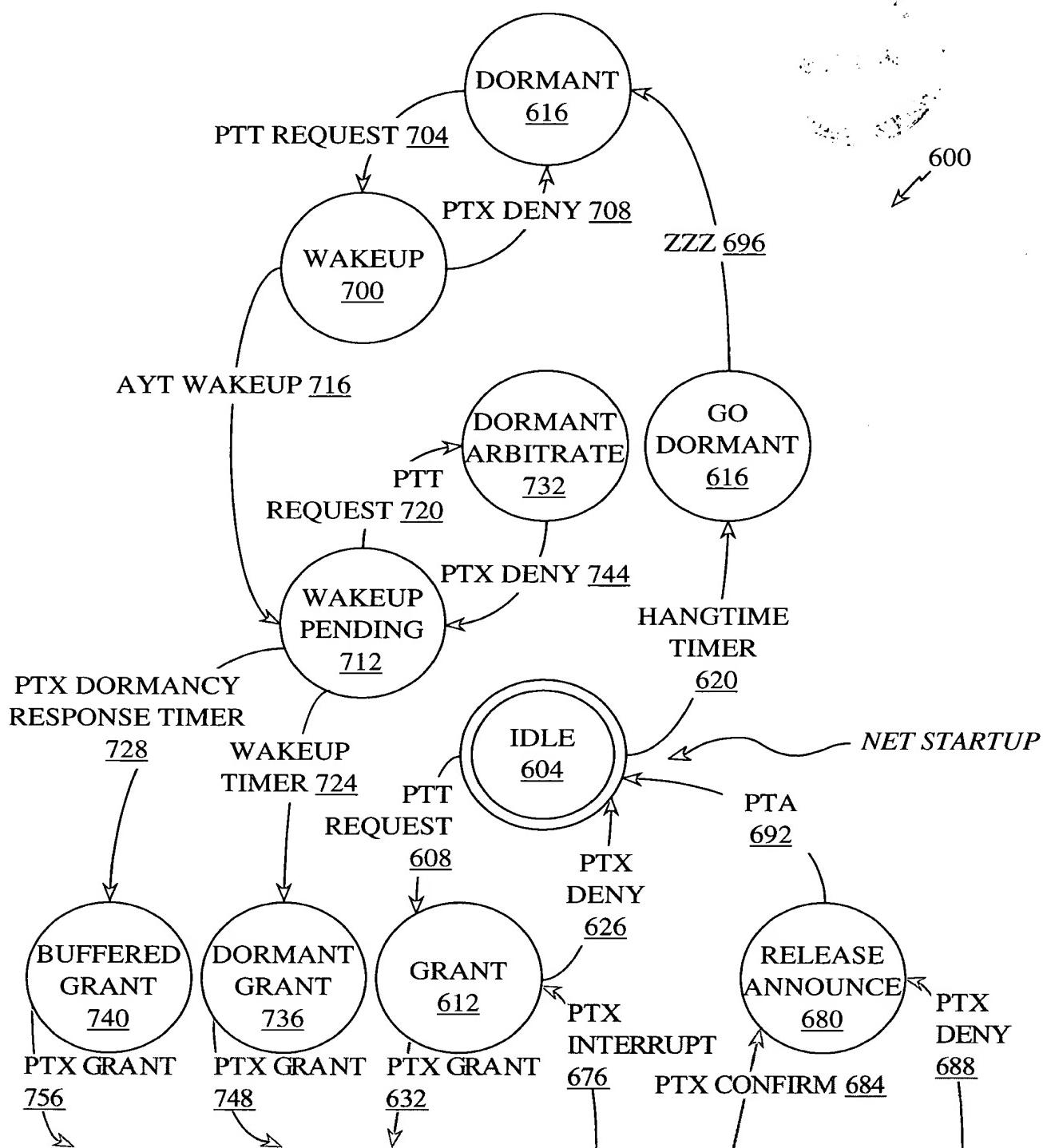
FIG. 15A: CM MEDIA SIGNALING STATE DIAGRAM

CONTINUED FROM FIG. 15A

PTX GRANT
756

PTX GRANT
748

PTX GRANT
632

PTX
INTERRUPT
676

PTX CONFIRM 684

PTX
DENY
688

BUFFERING
752

ANNOUNCE
628

ARBITRATE
656

RELEASE
CONFIRM
660

FAILSAFE
RECOVER
664

WAKEUP
TIMER
724

PTX
DENY
672

PTX
GRANT
668

PTX
REQUEST
644

PTA
640

PTT
RELEASE
648

FAILSAFE
TIMER
652

ANY
ILLEGAL
MEDIA
SIGNAL
MESSAGE

ERROR
764

TALK
636

ERROR
RESPONSE
760

AYT
PING

AYT
PING

CD PING
WAIT

CD PING

MS
ACTIVITY
TIMER

CD
MONITOR

ANY
MSG
FROM
MS
CD

ASK
382

CD
QUERY
384

FYI
RESPONSE
386

IAH

600

FIG. 15B: CM MEDIA SIGNALING STATE DIAGRAM

FIG. 16: CD STATE DIAGRAM